SERVICES 2000:

Canadian Services Industries and the GATS 2000 Negotiations

THE CANADIAN ENGINEERING SERVICES INDUSTRY

A Consultation Paper
in preparation for the World Trade Organization (WTO)
General Agreement on Trade in Services (GATS) Negotiations

Canada

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EXECUTIVE SUMMARY

Canada will soon be involved in comprehensive multilateral negotiations regarding trade in services. This discussion paper attempts to increase industry awareness of the main issues, challenges, and most importantly, opportunities that are relevant to the engineering services industry. It also seeks to gather input regarding the kind of approach Canada should take and the types of goals the engineering industry would like to see achieved during these service negotiations. Comments provided in response to this document will assist the Canadian government in establishing its negotiation objectives.

International trade in services between the over 130 member states of the World Trade Organization (WTO) is regulated by the General Agreement on Trade in Services (GATS). This Agreement was negotiated during the Uruguay Round of multilateral trade negotiations and covers all service sectors and all forms of trade in services. While the GATS is a government-to-government agreement, it is of direct relevance to firms. The GATS establishes a basic set of rules for world trade in services, a clear set of obligations for each member country, and a legal structure for ensuring that those obligations are observed. This helps identify market openness and attempts to provide equitable market access.

Within the global economy, the significance of trade in services in hard to ignore. International trade in services currently amounts to well over one trillion US dollars, a significant portion of total world trade. The service industries also account for a significant portion of domestic economic growth and new job creation. In light of the increasing tradeability of services and the growing importance of service sectors to the economy, it is important to continue liberalizing trade in services and establish effective rules.

Engineers are skilled professionals who provide independent advice and a wide range of services normally associated with the development and implementation of capital projects. The top 200 international consulting engineering firms performed US$ 14.5 billion of work on projects outside their own countries in 1996, according to the *Engineering News Record*. In 1996, Canadian firms ranked fourth in total international billings in consulting engineering after the United States, the UK and the Netherlands. Overall, 10% of Canadian firm revenues come from exports. Growing environmental needs, privatization of infrastructure projects, and more liberalized international markets are contributing to the growing demand for international consulting engineering services.

Through the GATS negotiations, Canada hopes to secure better access to foreign service markets and higher levels of liberalization in service sectors. Ensuring continued growth and opportunities for Canadian industry is a fundamental goal.

This discussion paper attempts to identify the barriers that the Canadian engineering sector faces when trying to export its services. However, to truly understand the situation of the Canadian industry

input from the private sector is necessary. By examining individual experiences in the international market, we hope to develop a better understanding of the real barriers that have impeded the exportation of Canadian services.

The input and participation of the engineering sector is essential to establishing appropriate negotiating objectives and determining Canada's negotiation agenda. Towards this end, we are seeking input from those involved, or interested, in the exportation of Canadian engineering services. The following questions are offered as guidelines for formulating comments.

Currently, how important are international exports and activities: very important; moderately important; or not important at all? What type of services do you currently export? What are the destinations of these service exports?

In order, what are the most important methods by which you reach your foreign clients: establishing a legal entity in the foreign country (i.e. a subsidiary or branch); temporarily sending personnel to the client's foreign location; delivering the services by mail, over the phone, or by fax; transmitting your services electronically over the Internet; or having the foreign client visit you in Canada.

In the future, which countries do you anticipate will be important export destinations for your services? What type of services do you anticipate exporting in the future? How important do you anticipate international trade to be in the future: very important; moderately important; or not important at all?

Do you anticipate that your method of delivering services internationally will change? In the future, what do you anticipate will be the most important methods by which you reach your foreign clients: establishing a legal entity in the foreign country (i.e. a subsidiary or branch); temporarily sending personnel to the client's foreign location; delivering the services by mail, over the phone, or by fax; transmitting your services electronically over the Internet; or having the foreign client visit you in Canada.

If you have limited or curtailed your international activities, was it as a result of: barriers to foreign market access; lack of government procurement opportunities; lack of commercial competitiveness; or other obstacles?

In each of your foreign markets (current or future), how much do local regulations affect your firm's ability to provide services: a lot; moderately; or not at all?

What specific measures have impeded your firm's activities, or have affected your customers' ability to do business with your firm? (If possible, indicate the legislation or policy that impedes the conduct of business.)

For each impediment to doing business, how important is it for your firm that the measure be removed: very important; moderately important; or not important at all?

What would you consider the priority concerns with respect to the liberalization of trade in consulting engineering services? (Rank the following from most to least important.)

- "buy-local" preferences
- investment limits or other restrictions
- restrictions on the form of commercial establishments (partnership, joint venture, etc.)
- restrictions on the movement of natural persons
- limitations on the number of service providers in the market (quotas, exclusive rights, etc.)
- non-recognition of professional credentials
- lack of market transparency
- restrictions on access to government procurement projects
- subsidies and tax incentives
- non-transparent domestic regulations
- licensing requirements
- qualification requirements
- nationality restrictions
- restrictions on company names
- language requirements
- residency requirements
- restrictions on fee-setting
- unfair bidding practices
- currency controls
- others _____

Negotiation of a multilateral agreement on services trade may well involve an exchange of concessions in which each country would agree to further liberalization of its domestic market. Are there any Canadian measures affecting your sector that are essential to your continued profitability and that should not be liberalized?

Are there certain areas where internationally liberalized market access in Canada would have a significant impact on Canadian firms? What would be this impact and how large is it likely to be?

Do you consider that barriers to trade in engineering services warrant significant attention in the GATS negotiations? Why? Should Canada devote significant resources to this issue?

If you wish to make your views known to the government, please forward your comments to the following address:

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I. INTRODUCTION

One of the key accomplishments of the last round of multilateral trade negotiations was the negotiation of the General Agreement on Trade in Services (GATS). This agreement resulted in improved rules for governing international trade in services. While much was accomplished during this first round of talks on trade in services, there remains room for improvement, for expanding the coverage of commitments, and for eliminating trade restrictions. A new round of negotiations, scheduled to begin no later than January 2000, will seek to extend the scope of existing commitments in trade in services.

Promoting trade liberalization continues to be an objective of the Canadian government. Strengthening and expanding the GATS is key to capitalizing on trade opportunities, increasing exports from our service sectors, and creating jobs and growth for all Canadians. Increased access to international trade and investment opportunities for the service industries results not only in job creation in services, but also in expanded business opportunities for all sectors.

The GATS is not just a treaty between governments; it is first and foremost an instrument for the benefit of business in general. Specifically, it increases opportunities for services firms seeking to export services or to invest and operate abroad. The Canadian government believes that further liberalization under the GATS will benefit Canadian industry and individuals alike. The active involvement of the private sector is important to the success of the upcoming negotiations and will ensure that Canadian policy truly reflects the export and economic interests of the country's service industries.

"Active service industries involvement in the negotiations is crucial to focusing Canadian negotiation objectives on the priorities of business."

Over the coming months, Canada will be consulting closely with service providers, provincial governments, and other interested parties to define Canadian objectives for the next round of GATS negotiations. The messages heard during these consultations will shape Canada's negotiation strategy, specifically what we want or need from other countries, and what we are willing to concede in order to achieve our objectives, and serve the industry's interests.

This document represents the first step of a consultation process aimed at determining Canada's negotiating position for the engineering services sector. Although engineering is a broad sector of activity, the paper focuses on engineering services as defined by the WTO in the GATS schedules. This definition is based on the United Nations Central Product Classification (UN CPC) and includes several sub-sectors such as advisory and consultative engineering services, engineering design services, integrated engineering and project management services for turnkey projects, and other engineering services. For a more detailed definition please refer to Annex A.

Other engineering services, such as those related to construction or environmental protection, are not directly included here because the GATS provides a separate listing for these services. The focus of this paper is on engineering services as professional services, or services provided by qualified engineers, and not on economic activities related to physical construction. The reader is invited to refer to the consultation paper on the Canadian construction industry for an overview of construction activities. A paper is also being prepared to discuss the environmental services industry, including environmental engineering.

It is hoped that the following analysis will provide valuable information for the purpose of soliciting the views of industry members. Within this document you will find:

- A brief review of the General Agreement on Trade in Services (GATS);
- An overview of the service industries within the global and domestic context;
- An analysis of the engineering sector in the world and in Canada;
- A discussion of the changing international and domestic regulatory and trade environments;
- An analysis of current GATS commitments related to engineering; and
- Initial Canadian objectives for GATS 2000.

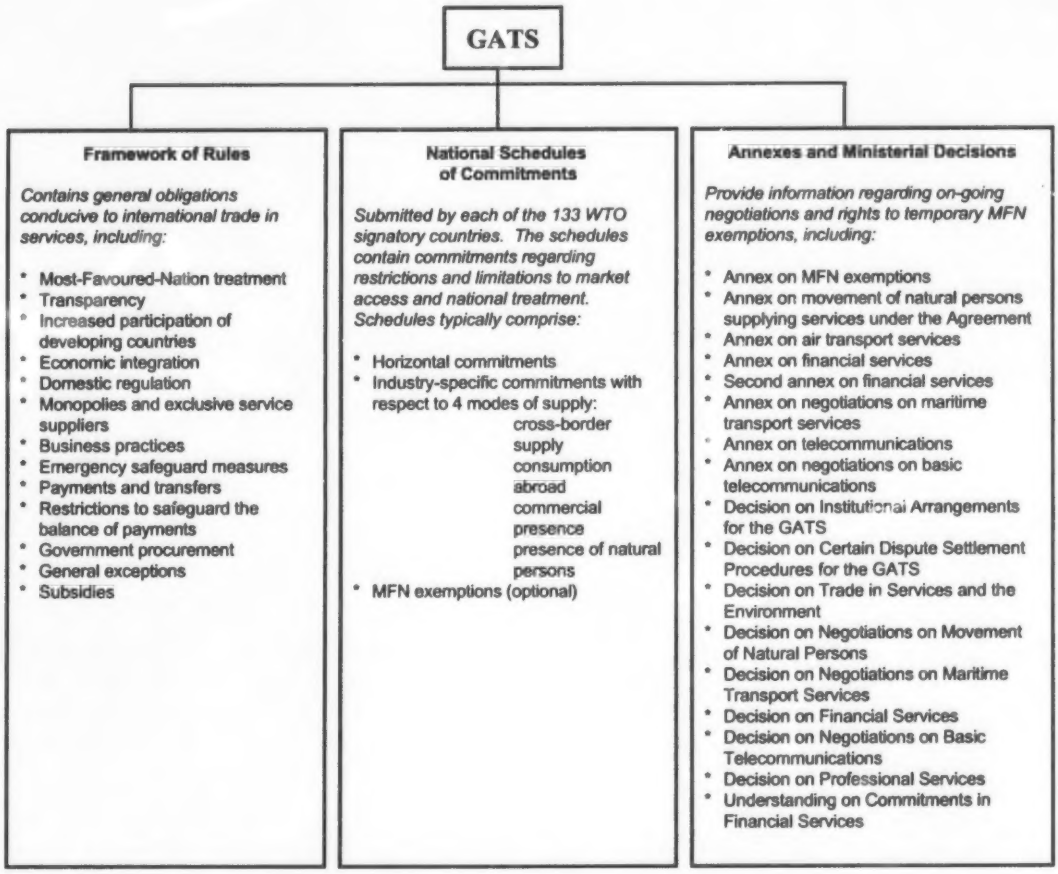
II. REVIEW OF THE GENERAL AGREEMENT ON TRADE IN SERVICES (GATS)

What is the GATS?

The General Agreement on Trade in Services (GATS), negotiated during the Uruguay Round of multilateral negotiations, is a multilateral, comprehensive framework of rules governing trade in services. It applies to all service sectors and all forms of trade in services, including investment. It comprises three parts:

1) the general framework of rules and obligations;
2) individual schedules of commitments for each WTO member, which specify, on a sector-by-sector basis, the conditions under which foreigners may supply services; and
3) annexes and ministerial decisions.

Figure 1: Components of the General Agreement on Trade in Services (GATS)


GATS
Framework of Rules
Contains general obligations conducive to international trade in services, including:
Most-Favoured-Nation treatment
Transparency
Increased participation of developing countries
Economic integration
Domestic regulation
Monopolies and exclusive service suppliers
Business practices
Emergency safeguard measures
Payments and transfers
Restrictions to safeguard the balance of payments
Government procurement
General exceptions
Subsidies
National Schedules of Commitments
Submitted by each of the 133 WTO signatory countries. The schedules contain commitments regarding restrictions and limitations to market access and national treatment. Schedules typically comprise:
Horizontal commitments
Industry-specific commitments with respect to 4 modes of supply:
cross-border supply
consumption abroad
commercial presence
presence of natural persons
MFN exemptions (optional)
Annexes and Ministerial Decisions
Provide information regarding on-going negotiations and rights to temporary MFN exemptions, including:
Annex on MFN exemptions
Annex on movement of natural persons supplying services under the Agreement
Annex on air transport services
Annex on financial services
Second annex on financial services
Annex on negotiations on maritime transport services
Annex on telecommunications
Annex on negotiations on basic telecommunications
Decision on Institutional Arrangements for the GATS
Decision on Certain Dispute Settlement Procedures for the GATS
Decision on Trade in Services and the Environment
Decision on Negotiations on Movement of Natural Persons
Decision on Negotiations on Maritime Transport Services
Decision on Financial Services
Decision on Negotiations on Basic Telecommunications
Decision on Professional Services
Understanding on Commitments in Financial Services

The multilateral trading system, under which the GATS was negotiated, has existed for fifty years. Among the outcomes of the latest round of negotiations was the establishment of the World Trade Organisation (WTO). This organization is responsible for overseeing the implementation of the various multilateral trade agreements and their dispute settlement mechanisms. The next round of GATS negotiations (GATS 2000) will take place under the auspices of the WTO.

While the GATS is a government-to-government agreement, it is of direct relevance to firms because it lays down the framework of international rules within which firms operate around the globe. The GATS establishes a basic set of rules for world trade in services, a clear set of obligations for each member country, and a legal structure for ensuring that those obligations are observed. This allows firms to identify which markets are open to foreign service providers and to be sure that these markets will remain open in the future. In the event of a disagreement, the Agreement contains a dispute settlement mechanism through which member countries can attempt to obtain the treatment to which they are entitled.

The Agreement establishes a basic set of rules for world trade in services, a clear set of obligations for each Member country and a legal structure for ensuring that those obligations are observed.

The GATS covers virtually every aspect of services trade, including:

the majority of services;
almost all the major world markets;
the different means by which a service can be supplied to a foreign market customer; and
the establishment of commercial operations in foreign markets.

The GATS should be one of the key reference texts used by corporate planners seeking to exploit foreign opportunities, especially outside North America. The next round of the GATS negotiations in 2000 should be a key focus for action by business.

To whom does GATS apply?

All Members of the WTO must abide by the GATS. With over 130 Members, the GATS covers over 90% of global trade in services. Most of the other major economies have applied to join the GATS, including Russia, Ukraine, China, Taiwan, Vietnam, and Saudi Arabia. Once these countries are admitted, virtually 100% of trade in services will be taking place between countries who have agreed to abide by the GATS rules.

What are the important obligations of the GATS?

The most important obligations of the GATS include the following:

Most-Favoured-Nation (MFN) Treatment. A WTO Member cannot discriminate among foreign service providers by offering more favourable treatment to service providers of any one country. Members are

permitted to maintain existing measures which contravene the MFN obligation, but any exceptions must be clearly stated in the member's MFN exemption list.

National Treatment. In the services sectors listed in a member's schedule of commitments, the Member cannot take measures to discriminate between domestic and foreign service providers; in other words, foreign firms must be treated as favourably as domestic firms. Any measure which violates the national treatment obligation must be clearly inscribed in the member's schedule of commitments.

Market Access. In the sectors listed in a member's schedule of commitments, the Member cannot take measures which are defined in the GATS as restricting market access. Examples of measures which would restrict market access include: quotas, economic needs tests, requirements for certain types of legal entities, and maximum foreign shareholding limits. Any measure which violates the market access obligation must be clearly inscribed in the member's schedule of commitments.

Domestic Regulation. Members' regulations must be administered in a reasonable, objective and impartial manner. Qualifications, licensing requirements and technical standards must be based on objective and transparent criteria, and not more burdensome than necessary to ensure the quality of the service.

Transparency. Members shall make public all measures which pertain to the GATS. The WTO must be notified of any relevant changes to government policies, regulations or administrative guidelines which significantly affect trade in services covered by the specific commitments under the Agreement. As well, Members must establish enquiry point and respond promptly to requests for information on their regulatory regimes.

In the event that a Member fails to carry out its obligations or specific commitments under the GATS, other Members have recourse to the WTO's dispute settlement mechanism.

How does the GATS relate to the day-to-day business of supplying a service?

The GATS covers all the major ways in which service suppliers serve their clients — the so-called modes of supply. This means that countries have to say whether or not they allow:

foreign firms to deal with clients in their market from across the border (i.e. electronically);
their citizens to travel abroad to visit the supplier in order to consume a service;
foreign service suppliers to establish an operation in their market; or
suppliers to enter the country in person to do business.

As a result, firms know where they stand in foreign markets and in their dealings with foreign clients. If they encounter barriers related to these modes of supply, they can verify whether the GATS Member concerned has made legal commitments in this area and ask for the assistance of their

government in resolving the issue. All Members have recourse to a dispute settlement process in case another Member does not conform to its obligations.

The Bottom Line

The GATS is a broad and comprehensive agreement which gives both guidance and enforceable guarantees to service suppliers who are seeking to supply services to foreign clients. Whatever the service sector, whatever the means of supplying the service and whatever the target markets within the WTO member countries, the provisions of the GATS provide guidance. When in doubt about their rights in a foreign market, or when seeking to clarify the opportunities open to them, the GATS should be a first point of reference for all service suppliers.

The GATS is primarily helpful to service exporters, but it also benefits other Canadians. Because it promotes trade and competition in services, business and consumer users of services have access to a broader spectrum of service suppliers and more competitive prices. All citizens stand to benefit from the new job opportunities and growth which can result from increased trade in services.

As the Canadian government conducts its pre-negotiation consultations, the industry and other interested parties now have an opportunity to identify the foreign trade restrictions they would like to see alleviated. Armed with this information, the government will strive to achieve an agreement that reflects the interests of the Canadian industry and public.

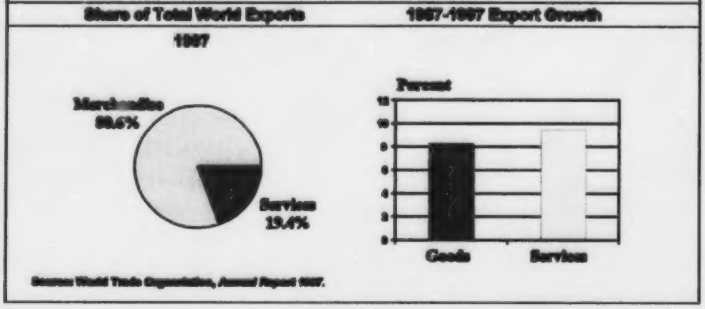
III. THE IMPORTANCE OF TRADE IN SERVICES

The International Picture

Within the global economy, the significance of trade in services is hard to ignore. In 1997, world trade in commercial services, measured on a balance of payments basis, accounted for approximately one-fifth of total global exports (US$6.8 trillion). Consequently, trade in commercial services are currently valued at more that US$ 1.2 trillion worldwide.

However, commercial potential extends significantly beyond simple cross-border flows of services. It is estimated that trade in services through commercial presence could be at least as large as cross-border trade — that means that the balance of payments figures may only account for half the actual trade in services.* Several groups argue that services account for approximately 60% of the world's economic output, or more than US$14 trillion in economic activity which could be within the reach of international competition.

Figure 2
World Exports of Merchandise and Services



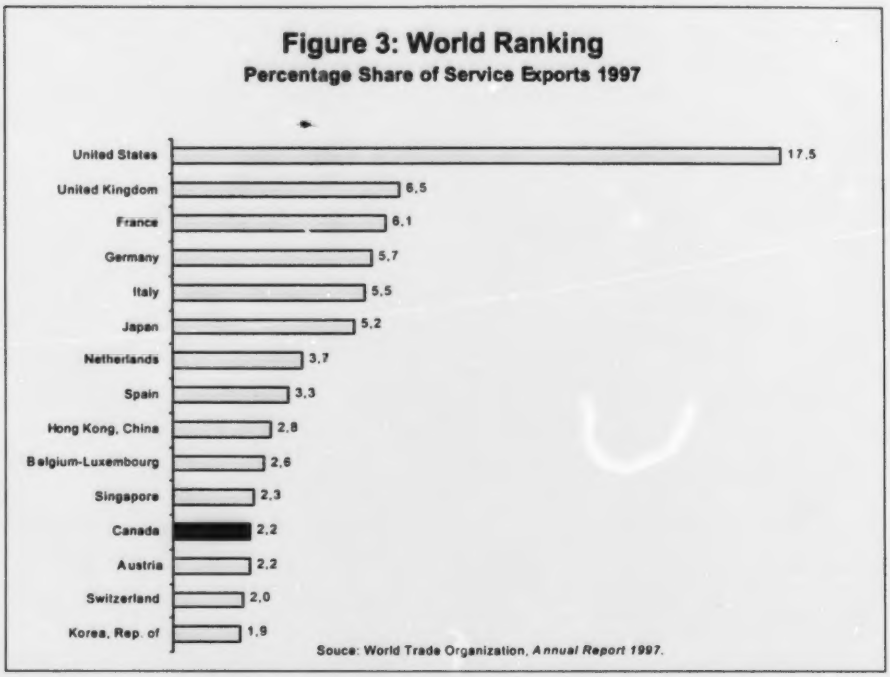
*** Cross-border trade in services** — where trade takes place from the territory of one Member into that of another. Only the service itself crosses the border, without the movement of persons, e.g. engineering plans sent by wire or satellite.

Commercial presence — any type of business or professional establishment, including branches and representative offices, e.g. direct investment in the host country. This data is currently unavailable.

Canada's Position

The service industries already play an important role in the Canadian economy and are growing faster than other components of Canadian Gross Domestic Product (GDP). Currently, these industries account for two thirds of Canada's GDP, almost three-quarters of employment, and nearly 90% of new job creation in Canada.

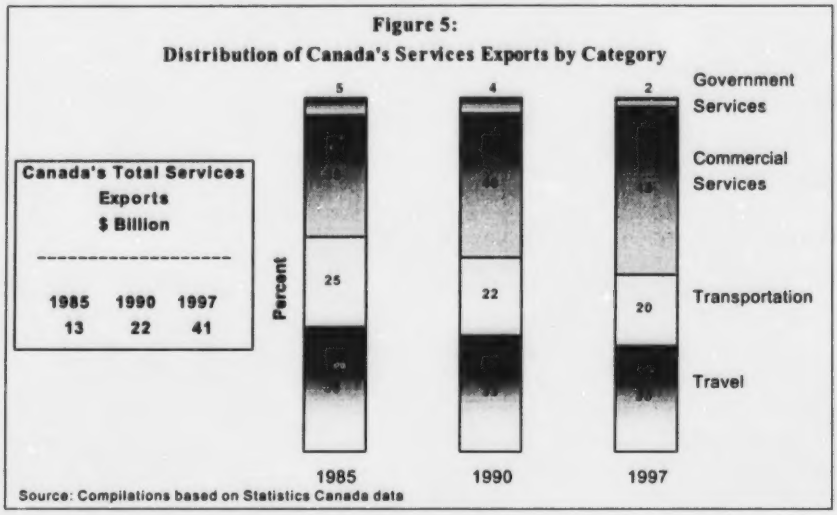
In 1997, the service industries generated 12.1% of total exports, and these exports accounted for 4.8% of Canada's GDP. At the same time, service imports represented 5.8% of Canada's GDP. Between 1987 and 1997, service exports grew on average by 9.1% per year, with commercial service exports growing at a more rapid pace of 11.2% per year. In addition, Canada's trade deficit in services fell from a peak of $13.4 billion in 1993 to $8.8 billion in 1997. As a result, Canada ranked 12th in the world for its exports of services in 1997 — representing 2.2% of the world's total service exports.



As with merchandise trade, the United States continues to be the main destination of Canada's service exports. However, the exports of services are more internationally diversified and the United States accounts for only 60% of total exports. One-fifth of Canada's service exports are bound for the European Union and Japan. The rest of service exports go mostly to other Asia Pacific and Latin America countries.

rate and now represent a smaller portion of Canada's service exports.

Figure 5:
Distribution of Canada's Services Exports by Category



Source: Compilations based on Statistics Canada data

While it is true that almost 50% of Canada's trade in services is made by the 100 largest firms in the service sectors, small and medium service firms are more likely to be engaged in exports than their goods producing counterparts.

... and this means?

In light of the increasing tradeability of services and the growing importance of the service industries to the economy, the prospects for more rapid growth in services trade are excellent. Canada clearly has the expertise and capabilities necessary to succeed in selling its services into rapidly growing international markets. In particular, Canadian engineers should be able to capitalize on this growing trend of trade in services. The opportunities of the international market need to be explored.

IV. THE ENGINEERING INDUSTRY

What is the engineering industry?

Engineering is a profession that provides independent advice and a wide range of services normally associated with the development and implementation of capital projects. Specialized fields within the sector include mechanical, civil, electrical, chemical, and computer engineering activities and technologies. The focus of this paper is on engineering services as professional services, or services provided by qualified engineers, and not on the economic activities of physical construction and related engineering works, although they are obviously closely related. The reader is invited to refer to *The Canadian Construction Industry: A Consultation Paper* for an overview of construction activities.

The primary services provided by consulting engineers are design services, planning and design development, detail design, procurement services, field services during construction, and project management. Engineering services commonly fall within three general categories: 1) general services such as feasibility studies, cost estimations, preparation of detailed drawings, specifications and contract documents, and supervision of construction; 2) specialized services such as design and development of process equipment, environmental advisory and design services, materials testing, software or custom systems development and project management; and 3) comprehensive or turnkey services, such as manage-engineer-procure-construct(MEPC) and build-own-operate-transfer(BOOT) contracts.

The International Market

Since engineering services are strongly integrated and inter-related with physical construction activity or other business services, measurement of the global economic importance of this sector is difficult. In most official statistics, engineering is absorbed in the broader categories of business services or construction activity. In the United States, engineering is one of the largest and most diverse professions, whereas the engineering sector in Europe appears to be relatively smaller.

Engineering service suppliers seem to be characterized by the dominance of small businesses. Approximately 80% of the costs incurred by engineering firms are fixed overhead costs. Salaries of staff, most of them highly qualified people, account for the bulk of costs. Since engineers occupy a position upstream of the building and construction process, demand for engineering services is closely related to that of construction and overall industrial activity, both of which are in turn closely linked to the economic cycle.

With advanced communication systems, blueprints and designs can be transmitted electronically and consulting can be performed on-line. These technological advances tend to raise the importance of cross-border supply of engineering services. On the basis of the existing fragmented data, cross-border trade seems to have increased in North America but this trend is not evident in Europe. It will probably

remain true, however, that the bulk of engineering services will still take place through a commercial presence or the presence of natural persons.

A Snapshot of the Canadian Industry

The engineering industry has traditionally been one of Canada's strongest and most internationally competitive service industries. Statistics Canada has estimated that, in 1995, employment in the consulting engineering industry was roughly 70,000 people working in some 6,403 firms. Total billings amounted to approximately C$6.3 billion the same year.

Despite its significant contribution to the economy, the rate of growth of the industry has been declining since the end of the 1980s and margins are also narrowing. The smaller profit margins are partially attributable to heightened national and international competition. Cuts in government expenditures on large scale projects and the continuing increase in the industry labour costs are also contributing to the declining profitability.

The industry is comprised of publicly and privately owned firms and sole proprietorships. About half of the demand for engineering services in Canada is met by specialized design firms, with the remaining demand being satisfied by in-house engineering staff within large non-engineering firms. Most Canadian design firms are Canadian owned. They usually employ fewer than 50 people (the average Canadian firm employed 13 people in 1991) and earn less than C$250,000 annually.

While the sector remains fragmented, a trend towards consolidation has emerged recently among both small and larger firms. Firms often merge in order to take on international projects. Small firms, however, continue to be created by specialists coming into the market. These smaller firms tend to focus on niche markets.

Canadian consulting engineering firms and employees are distributed regionally according to natural resource sites, industrial locations, or urban centres. The large consulting engineering base in the Ontario-Québec industrial heartland presently accounts for about two thirds of the industry's total fee income. Compared to most manufacturing industries, ownership concentration in this industry is low, with the top eighty firms together earning only thirty-five percent of total industry revenues.

Canadian firms have traditionally had a competitive advantage in resource-based, energy-related and infrastructure projects. Other strengths include integrity and a reputation for quality engineering services, international success through participation in large projects, and an ability to adapt to unfamiliar cultures and constraints. In order to tap into new domestic and international markets, consulting engineers are specializing in fields where market opportunities have arisen, such as advanced manufacturing technologies and systems integration. The Canadian consulting engineering industry is also amassing considerable technical expertise in environmental services, in areas such as recovery and recycling waste (including hazardous waste) and air pollution controls.

In 1996, Canadian firms ranked fourth in international billings for consulting engineering services, when foreign billings from Canadian operations (exports) and from subsidiaries abroad are combined. Canadian design firms supplied 7.4 percent of global exports of consulting engineering services in 1996. According to *Engineering News Record*, a major U.S. industrial journal, Canadian consulting engineering firms earned US$ 1.076 billion in foreign countries, while foreign firms in Canada only billed approximately US$ 384 million. In fact, Canada has maintained a trade surplus in engineering services since 1981. However, our international performance has slowed down since 1989. Canada's main competitors have achieved higher growth rates, thus weakening Canada's international position.

Because Canada's strongest markets are considered relatively mature, significant growth opportunities in the domestic market appear to be limited, but opportunities in world markets are enormous. Over the short term, global market opportunities have emerged as a result of growing environmental needs, trade liberalization, and a trend towards privatizing government projects. Those firms able to transform from a pure engineering to a full-service model will be positioned to tap into extremely large and rapidly growing international markets.

Despite recent programs to encourage exports of engineering services, only 10% of total firm revenues come from foreign markets. Compared to other service industries, however, this export performance is fairly robust. It is widely held that Canadian firms can increase their international participation by building on their niche markets and areas of specialization. A growing number of Canadian firms are becoming international players, but many firms that appear to be export-ready have yet to take the plunge.

V. REGULATORY STRUCTURE AND RELEVANT TRADE LIBERALIZATIONS

Globally ...

Engineering services belong to the group of "accredited" professional services. Most countries require a licence for accredited professionals, such as engineers, to practice in their territory. In addition to professional qualifications, the licensing requirements may include establishment or residency conditions, absence of criminal records, the taking of an oath, subscription to a professional indemnity insurance, etc.

Compared to some other accredited professional services, such as accountancy and legal services, engineering services appear to be subject to fewer restrictive regulations. According to the OECD, engineering services in OECD countries are not usually restricted to specific practitioners or regulated by law. In fact, engineering is probably the sector where access for foreign professionals and firms is the least difficult. Controls tend to take place more through norms and standards, such as building and safety codes, rather than through regulations on practitioners. Several OECD countries including Denmark,

Switzerland, Finland and the United Kingdom have no legal restrictions on the provision of engineering services. This is in sharp contrast to accountancy and legal services, for which virtually all countries have regulations restricting access.

Also, mutual recognition agreements involving the recognition of educational achievements and professional experience have emerged in recent years as a means to gain market access.

Regional and bilateral efforts to facilitate access for foreign engineers have made significant progress in recent years. Under the North American Free Trade Agreement (NAFTA), a mutual recognition agreement (MRA) for temporary and permanent licensing of engineers, recognizing professional qualification, was signed by federal authorities in 1995 but remains to be ratified by all states except Texas. This agreement provides mutual recognition for American, Canadian and Mexican engineers from partner countries. Canada and the United States also signed a bilateral MRA under the auspices of the Canada-U.S. Free Trade Agreement. This MRA has been ratified by most states and provinces. Canadian firms, however, are often unable to bid on U.S. federal and state government contracts because of national security concerns, the application of "Buy America" preferences, and the use of small business and minority set asides.

The Washington Accord, signed in 1989, recognizes the substantial equivalency or comparability of engineering education courses leading to the first professional degree or basic education in engineering (the "Accredited Engineering Degree"). However, this accord, to which eight countries are signatories (Australia, Canada, Ireland, New Zealand, United Kingdom, United States, Hong Kong/ China, and South Africa) does not address the mutual recognition of professional credentials.

In Europe, the Fédération européenne des associations nationales d'ingénieurs (FEANI) has established the title of EurIng and has determined a process of assessment of individual engineer's qualifications and practical experience. The EurIng requires a minimum of seven years of training, qualifications, and experience (the latter has to be for at least two years).

A large number of bilateral agreements on recognition of practice standards in engineering have been concluded in the Asia Pacific region. Such developments in self-regulatory initiatives could lead to more rapid international recognition of qualifications and practice competency. But there is still a need to negotiate professional accreditation and reciprocity agreements with other countries.

Regulations applied in the professional services are mainly intended to protect consumers by ensuring the quality of services. The potential impact of regulatory measures on competition, market access and national treatment needs to be weighed carefully against their societal objectives. Typical market access limitations in the engineering industry include restrictions on the form of commercial presence. Often, joint operations or partnerships with local professionals are required. For natural persons, entry may be subject to economic needs tests or nationality requirements. Access of foreign

suppliers may be limited to projects above or below a certain size. National treatment limitations include residency requirements and requirements to use local services or to employ local professionals.

In many countries, the public sector plays an important role in the demand for engineering services. Consequently, domestic regulations and practices adopted with regard to public procurement can potentially represent significant barriers for foreign firms seeking to bid on publicly financed projects. The GATS currently imposes only minimal disciplines on the government procurement of services. Nevertheless, a GATS working group is presently considering the possibility of developing new GATS disciplines dealing with government procurement. Moreover, it is worthwhile to note that several developed countries have obligations in this respect under the WTO's General Agreement on Government Procurement (AGP).

And In Canada ...

A professional engineering association exists under provincial and territorial legislation in each of the ten Canadian provinces and two territories. Legislation assigns to the associations all the necessary responsibility and authority to govern the profession and its practitioners within its jurisdiction. Although the provincial statutes are revised independently of each other and although there are many differences among them, the key elements of these statutes are essentially the same.

Each province requires anyone practising engineering to be a registered professional engineer (P.Eng.), whether the work is performed as an employee for industry or government or is provided as a consultant to the public. There are very few exceptions, which include such groups as engineers serving in the armed forces. "Professional engineer" is therefore the legal identification of a person licensed to engage in engineering work. In some jurisdictions, there are additional registration requirements beyond the P.Eng. for certain categories of work. These include additional requirements to enable the registrant to offer services to the public. Although the P.Eng. designation is common for all provinces ("ing." in Quebec), individuals are required to register in each jurisdiction where they work as an engineer.

Professional registration is available to those individuals who have met the requirements with respect to academic qualification, language competency, satisfactory experience and knowledge of professional practice and ethics, and who are of good character. As professionals, engineers individually and collectively commit to serve and protect the public in all their engineering endeavours. Each association, as a self-regulating body, is mandated by statute to serve and protect the public interest by:

i. regulating the practice of professional engineering;
ii. establishing and maintaining minimum standards of practice, knowledge and skill of its members; and
iii. establishing and maintaining standards of professional ethics among its members.

The responsibility for self-regulation also requires the profession to ensure that only qualified persons practice engineering and that they do so with concern for societal and environmental needs, while maintaining responsibility towards clients, employers, colleagues, subordinates, themselves, and the profession at large.

While a number of provinces maintain residency and local presence requirements for practice under a permanent license, all provinces have procedures for temporary licensing of foreign non-resident engineers, none of which imposes any form of residency or local presence requirement. Temporary licenses are valid for one year and are renewable. The only difference between a permanent licence and a temporary licence is that the former affords the holder the right to participate in the governance of the profession.

As mentioned previously, Canada has negotiated mutual recognition agreements with the United State and Mexico under the North American Free Trade Agreement. Canada is also a signatory to the Washington Accord, recognizing the equivalency or comparability of engineering education courses. Canada recently signed a bilateral trade agreement with Chile under which there are no reservations to free trade in engineering services. In addition, Canada has been working with members of the Asia Pacific Economic Cooperation (APEC) to develop recognition of professional qualifications in engineering. As a result, the Canadian market is relatively open to foreign competition although contractors must register in each of the provinces where work is undertaken.

The Canadian Experience with Foreign Regulations

Interviews were conducted with a small sample of Ontario firms to determine the real barriers to trade in engineering services. The firms interviewed had a variety of experiences in different international markets. Most indicated that they usually retain local partnerships on overseas projects. This is done mainly for practical business reasons such as ensuring that someone is close to the client and the project site. Having local partners reduces the learning curve for Canadian firms since the partner is familiar with the local regulations and code. Generally, partnerships also get around any problems with professional accreditation, language and business culture. Since local partnerships are preferred for business reasons, market access restrictions requiring local partnerships do not generally represent a barrier to the entry of Canadian firms.

For Canadian engineers in the United States, recognition of professional accreditation still remains a problem even though a Mutual Recognition Agreement has been negotiated. These problems arise because accreditation is managed at the state level and access to foreigners varies by state. Canadian firms selling services in the United States currently deal with this problem by sub-contracting rather than acting as the main contractor. Alternatively, larger firms operate through U.S. subsidiaries or related firms as market entry points.

Firms that are seen as experts or specialists do not usually face regulatory or accreditation problems because the client wants them to handle the project. However, problems may arise when Canadian firms are competing directly with domestic specialists.

Transparency in local regulations and the requirements for bidding are important to Canadian engineering firms operating abroad. Instability and inconsistent application of the laws can cause real difficulties for firms operating in a market with which they are relatively unfamiliar. Canadian firms have been discouraged from pursuing projects in countries which lack clear and transparent regulations.

VI. ANALYSIS OF GATS COMMITMENTS RELATED TO ENGINEERING

During the Uruguay Round of trade negotiations, a working group on professional services was created to discuss the applicability to the professional services sector of the basic concepts developed for the services agreement. It was agreed that, subject to further clarification and elaboration of particular provisions relating to harmonization and mutual recognition of regulations, standards or qualifications, there seemed to be no need for any specific annex/annotation with regard to professional services such as engineering. Individual countries, however, have maintained restrictions in their individual sector-specific schedules.

At the conclusion of the Uruguay Round, it was felt that work remained to be done on domestic regulation of the professional service industries, including engineering. Domestic regulations such as qualification standards constitute effective barriers to the free flow of trade in engineering services. As a result, the Working Party on Professional Services (WPPS) was established to contribute to the development of additional rules that will govern the liberalization of professional services in the future. The group was instructed to begin with the accountancy sector and the outcome from this work will constitute a basis for work on other professional sectors such as engineering.

The following section analyses the commitments related to the engineering sector made by WTO Members during the last round of negotiations. Annex B contains a summary of these commitments for Canada's key trading partners. For complete details about GATS commitments, please contact us directly or visit our web site at http://services2000.ic.gc.ca .

Generally, the commitments embodied in the schedules submitted in this first round of negotiations on services guarantee foreign service providers existing levels of access to local markets. These commitments on market access are of real value because they provide greater certainty and reduce the risk that new restrictions may adversely affect international business transactions.

The Horizontal Commitments to Consider ...

As mentioned earlier, all Members committed to the basic precepts of trade liberalization in services, including the Most-Favoured-Nation (MFN) Treatment. In addition, several Members reached an agreement on some basic horizontal issues and restrictions. These consist of broad measures affecting investment, real estate transactions, government subsidies or taxation, and the temporary movement of natural persons. To assess the full extend of trade liberalization, horizontal commitments have to be examined in conjunction with sector-specific commitments.

... in Light of the Sector-Specific Commitments

Commitments related to engineering services are identified in the sector-specific schedules of each member country. In the service industries listed in their schedules, unless otherwise identified, Members agree to the basic obligations of the GATS: national treatment and market access. As well, there are general obligations related to domestic regulation and transparency.

As a result of the Uruguay Round and subsequent accessions, 69 WTO member countries have made commitments in at least one of the sub-sectors under engineering services, while 43 member countries have made commitments under integrated engineering services. In addition, China (which is not yet a Member and therefore not legally bound by these commitments), Aruba, and the Netherlands Antilles submitted schedules in engineering services. In total, 71 countries have made commitments under engineering services and 43 under integrated engineering services . However, the European Union has a consolidated schedule for its 15 member states.

Table 2 in Annex B identifies the countries with commitments in the engineering and integrated engineering sectors. The countries that did not make commitments in consulting engineering are not constrained by the GATS principles of national treatment and market access. They are also not required to adhere to the obligations related to domestic regulation and transparency for this sector.

Analysis of the level of commitment can be done by categorizing the commitments as: full commitments (no limitation, implying total liberalization); partial commitments (those made with certain limitations); and no commitments (unbound). Looking at market access commitments of countries in these sectors, 52-66% of commitments made for the supply of services through commercial presence were full commitments. These figures decline substantially to 24-31% when horizontal measures are taken into account. For the presence of natural persons, which is important for these services, no Member has full commitments when horizontal measures are taken into account. These figures compare favourably with other professional service industries, however, and indicate that relatively liberal commitments were undertaken for engineering services compared to legal or accounting services.

Table 1:
Analysis of Commitments made by Members in Engineering Services

Market Access (number of countries with commitments)	Cross-Border Supply			Consumption Abroad			Commercial Presence			Presence of Natural Persons		
	full	partial	none	full	partial	none	full	partial	none	full	partial	none
Engineering Services (69)	57%	21%	22%	64%	19%	17%	52%	45%	3%	5%	90%	5%
	50%	*28%*	*22%*	*55%*	*28%*	*17%*	*24%*	*72%*	*3%*	*0%*	*95%*	*5%*
Integrated Engineering Services (43)	72%	9%	19%	78%	9%	13%	66%	25%	9%	6%	88%	6%
	59%	*22%*	*19%*	*66%*	*22%*	*13%*	*31%*	*59%*	*9%*	*0%*	*94%*	*6%*

Notes:

1. Full commitment is indicated by "none" in the market access column of the Schedule.
2. Partial commitment is when there are limitations inscribed in the market access column of the Schedule.
3. No commitment is indicated by "unbound" in the market access column of the Schedule.

All figures that are *in italics* indicate the percentage taking into account horizontal commitments applicable to all sectors.
Source: *Architectural and Engineering Services* — Background Note by the Secretariat, WTO Council on Trade in Services S/C/W/44.

The level of commitments vary by country and region. Strong commitments have been provided by some countries, including the United States and European countries. Regions such as South America, the Middle East, and Africa are still relatively restrictive since only a few countries submitted schedules and those submitted are not very substantial. The scope of commitments in the consulting engineering industry range from Iceland, with no limitations except that the national treatment for the presence of natural persons is only bound by the horizontal commitments, to Panama which remains unbound in most areas with some minor allowances for hiring natural persons as long as they show suitable qualifications.

The majority of Members' schedules are unrestricted with respect to all modes of supply except the presence of natural persons. Countries with relatively liberal commitments include the United States, most of Europe, Australia, Israel, Korea, Lesotho and South Africa. The majority of developing countries did not submit schedules in the engineering industries, but those that did have made relatively limited commitments.

Limitations in General

Although 69 and 43 Members provided schedules for the engineering and integrated engineering industries respectively, there are limitations to the commitments. Annex B contains a map identifying the limitations to GATS commitments by region. Common limitations to market access include restrictions on the type of legal entity allowed for commercial presence, limits or ceilings on foreign capital, demonstrated economic needs, and local licensing or registration requirements. The less developed countries often require partnerships with local firms or professionals before allowing foreigners to work in their territory. Residency and nationality requirements are also common.

With regard to national treatment, the most prevalent limitations relate to licensing and qualification of workers. Nationality and residency requirements are also frequent, with the latter being more numerous than the former. However, some countries have extended temporary licensing, thereby eliminating some of the residency requirements.

Difficulties for foreign professionals would normally arise from non-recognition or limited acknowledgement of home country education, qualification or accreditation/licenses; nationality and residency requirements; restrictions on incorporation; restricted eligibility for contracts including government procurement contracts; and prohibition on advertising for ethical reasons. For engineering firms, restrictions on foreign direct investment and ownership; requirements pertaining to a minimum number/percentage of local staff; and restrictions on the international relationship of locally established firms have been identified as potential impediments to trade.

And Canada Specifically ...

Canada's schedule is similar to that of the majority of other Members, but there are several limitations based on requirements under provincial legislation. Limitations on market access and national treatment include residency and commercial presence requirements for accreditation. The Canadian schedule identifies existing barriers to engineering services related to the issuance of a permanent license. Canada did not undertake any commitments with regard to temporary licensing regimes.

In the engineering and integrated engineering service industries, market access for the cross-border supply, consumption abroad and the presence of natural persons is limited in British Columbia, Newfoundland, Alberta, Ontario, New Brunswick and Nova Scotia by the requirement for engineers to be permanent residents for accreditation purposes. In Manitoba, consulting engineers are required (for cross-border supply and consumption abroad) to establish a commercial presence for accreditation. In the engineering industry (not integrated engineering), national treatment for cross-border supply and presence of natural persons is limited in Saskatchewan and Quebec by residency requirements for accreditation.

VII. PROPOSED CANADIAN OBJECTIVES FOR GATS 2000 NEGOTIATIONS

Canada's objective for the next round of GATS negotiations is to improve the quality and quantity of schedules offered by Members. Based on initial analysis, the following have been identified as proposed objectives for the consulting engineering industry (the list is only partial and open to review):

Securing better market access for the *commercial presence* mode of delivery by negotiating less restrictive investment measures, nationality requirements, and fewer stipulations regarding the type of corporate entities Canadian firms can establish abroad;

Securing improved access for professionals and natural persons;

Improving transparency requirements and ensuring consistency of domestic regulations to facilitate foreign entry;

Achieving higher levels of liberalization in a variety of other professional service industries given that successful engineering firms will require mastery in organisation skills as well as advanced technology and computer aided design. Countries that are strong in consultancy, design services, technology and organisational know-how will have a comparative advantage in the engineering service industry; and

Increasing the number of countries making full commitments in engineering and integrated engineering industries.

VIII. LET US KNOW WHAT YOU THINK

Those involved, or interested, in the exportation of Canadian engineering services can assist the government in refining these general objectives by providing information on their particular international activities and experiences. The following questions are offered as guidelines for formulating input.

Currently, how important are international exports and activities: very important; moderately important; or not important at all? What type of services do you currently export? What are the destinations of these service exports?

In order, what are the most important methods by which you reach your foreign clients: establishing a legal entity in the foreign country (i.e. subsidiary or branch); temporarily sending personnel to the client's foreign location; delivering the services by mail, over the phone, or by fax; transmitting your services electronically over the Internet; or having the foreign client visit you in Canada.

In the future, which countries do you anticipate will be important export destinations for your services? What type of services do you anticipate exporting in the future? How important do you anticipate international trade will be in the future: very important; moderately important; or not important at all?

Do you anticipate that your method of delivering services internationally will change? In the future what do you anticipate will be the most important methods to reach your foreign clients: establishing a legal entity in the foreign country (i.e. subsidiary or branch); temporarily sending personnel to the client's foreign location; delivering the services by mail, over the phone, or by fax; transmitting your services electronically over the Internet; or by having the foreign client visit you in Canada.

If you have limited or curtailed your international activities, was it as a result of: barriers to foreign market access; lack of government procurement opportunities; lack of commercial competitiveness; or other obstacles?

In each of your foreign markets (current or future), how much do local regulations affect your firm's ability to provide services: a lot; moderately; or not at all?

What specific measures have impeded your firm's business, or have affected your clients' ability to do business with your firm? (If possible, please cite the legislation or policy that impedes the conduct of business.)

For each impediment to doing business, how important is it for your firm that the measure be removed: very important; moderately important; or not important at all?

What would you consider the priority concerns with respect to the liberalization of trade in consulting engineering services? (Rank the following from most to least important.)

- "buy-local" preferences
- investment limits or other restrictions
- restrictions on the form of commercial establishments (i.e. partnership, joint venture, etc.)
- restrictions on the movement of natural persons
- limitations on the number of service providers in the market (i.e., quota, exclusive right, etc.)
- non-recognition of professional credentials
- lack of market transparency
- restrictions on access to government procurement projects
- subsidies and tax incentives
- non-transparent domestic regulations
- licensing requirements
- qualification requirements
- nationality restrictions

- restrictions on company names
- language requirements
- residency requirements
- restrictions on fee-setting
- unfair bidding practices
- currency controls
- others _____

Negotiation of a multilateral agreement on services trade may well involve an exchange of concessions in which each country would agree to further liberalization of its domestic market. Are there any Canadian measures affecting your sector that are essential to your continued profitability and that should not be liberalized?

Are there certain areas where internationally liberalized market access in Canada will have a significant impact on Canadian firms? What will be this impact and how large will it be?

Do you consider that the barriers to trade in engineering services warrant significant attention in the GATS negotiations? Why? Should Canada devote significant resources to this issue?

If you wish to provide views to the government on the engineering service industry and the GATS 2000 negotiations, please forward your input to the following address:

GATS 2000
International Investment and Services Directorate
Industry Canada
235 Queen Street
Ottawa, Ontario
K1A 0H5

Attention: Carla VanBeselaere
Telephone: (613) 957-8108
Fax: (613) 952-0540
E-mail: vanbeselaere.carla@ic.gc.ca

IX. ACKNOWLEDGEMENTS AND REFERENCES

Much of the information in this document was sourced from the following three documents:

Consulting Engineering — Overview and Prospects: A Sector Competitiveness Framework prepared by the Service Industries and Capital Projects Branch of Industry Canada.

Canada in the Global Context: A statistical overview of the Canadian service economy prepared by the Service Industries and Capital Projects Branch of Industry Canada.

Architectural and Engineering Services: A background note prepared by the World Trade Organization Secretariat.

X. ADDITIONAL INFORMATION SOURCES

About the Consulting Engineering Industry or Service Industries in General

Additional information on the consulting engineering industry or service industries in general can be found on the Strategis website under Business Information by Sector, Service Industries and Capital Projects:

http://strategis.ic.gc.ca

or please contact:

Philip Morrison
Service Industries and Capital Projects Branch
Industry Canada
235 Queen Street
Ottawa, Ontario, K1A 0H5
Telephone: (613) 941-4213
Fax: (613) 952-9054
e-mail: morrison.philip@ic.gc.ca

About GATS

The legal text of the GATS is part of the *Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, and can be purchased through any government bookstore. It is publicly available through the WTO website at:

http://www.wto.org/wto/legal/finalact.htm

The WTO website also provides additional background material on the structure of the GATS and on recent sectoral negotiations at:

http://www.wto.org/wto/services/services.htm .

The EU also provides a practical examination of the WTO GATS commitments on its website at:

http://gats-info.eu.int/

You can also contact:

The Services Trade Policy Division
Department of Foreign Affairs and International Trade
Lester B. Pearson Building
125 Sussex Drive
Ottawa, Ontario, K1A 0G2
Telephone: (613) 944-0487
Fax: (613) 944-0058

More information on the GATS 2000 Agenda

Visit Industry Canada's Service Industry website on Trade in Services at:

http://services2000.ic.gc.ca

Other Useful Information Link on the Internet

The United States International Trade Commission (USITC) is an independent, quasi-judicial federal agency that provides objective trade expertise to both the legislative and executive branches of government, determines the impact of imports on U.S. industries, and directs actions against certain unfair trade practices, such as patent, trademark, and copyright infringement. USITC analysts and economists investigate and publish reports on U.S. industries and the global trends that affect them.

Its web site is http://www.usitc.gov/

ANNEX A

DEFINITIONS AND GLOSSARY OF GATS TERMINOLOGY

Agreement on Government Procurement (AGP) — A WTO plurilateral agreement to which not all Members are signatories. Its purpose is to open up as much of this business as possible to international competition. It is designed to make laws, regulations, procedures and practices regarding government procurement more transparent and to ensure they do not protect domestic products or suppliers, or discriminate against foreign products or suppliers.

Balance of Payments — The difference between the income and expenditure of a country on its external account, resulting from exports and imports of goods and services, and governmental transactions.

Bound commitment — Commitment that cannot be made more restrictive in the future; only further liberalization is permitted (unless agreed penalty is paid).

Commitment — A measure, usually regarding market access and national treatment, that affects international trade in services. Commitments are listed in national schedules and identify service sectors and modes of supply that are affected.

Emergency Safeguards — Measures suspending commitments under certain emergency situations.

Engineering Services Definition — Most countries use the World Trade Organization's Services Sectoral Classification list to define what is meant by Engineering and Integrated Services when making commitments in these sectors. Both of these sectors correspond to the United Nations Central Product Classification (UN CPC) at the four-digit level. This definition includes:

Engineering Services (CPC 8672): This sector covers all activities except integrated engineering services. It includes: advisory and consultative engineering services, engineering design services for foundations and building structures, engineering design services for mechanical and electrical installations, engineering design services for civil engineering construction, engineering design services for industrial processes and production, engineering design services not elsewhere classified, other engineering services during the construction and installation phase, and other engineering services.

Integrated Engineering Services (CPC 8673): Includes integrated engineering services for transportation infrastructure turnkey projects, integrated engineering and project management services for water supply and sanitation works turnkey projects, integrated engineering services for the construction of manufacturing turnkey projects, and integrated engineering services for other turnkey projects.

Exclusive Rights — When the ability to provide certain services is restricted to a specific firm or firms.

Horizontal Commitment — Commitment that applies to international trade in multiple service sectors. Typically, horizontal commitments constitute limitations on market access or national treatment.

Juridical person — Any legal entity duly constituted or otherwise organized under applicable law, whether for profit or otherwise and whether privately- or government-owned; includes corporations, trusts, partnerships, joint ventures, sole proprietorships, or associations (branches and representative offices are not included).

Measure — A law, regulation, rule, procedure, decision, or administrative action that affects trade in services. Measures may pertain to: (1) the purchase, payment, or use of a service; (2) a service suppliers's access to, and use of, services which are required to be available to the general public; and (3) a service supplier's ability to establish a presence, including a commercial presence, in a host country.

Member Countries — Those countries who are signatories to the World Trade Organization and thus, the GATS.

Modes of Service Delivery:

Cross-border trade in services (Mode 1) — Trade takes place from the territory of one Member into that of another without the movement of the service provider, e.g. engineering plans sent by wire or satellite.

Consumption Abroad (Mode 2) — Services consumed or purchased by nationals of a Member in the territory of another Member where the service is supplied, e.g. tourism, where the consumer travels to another country to consume a service.

Commercial presence (Mode 3) — Any type of business or professional establishment, including branches and representative offices, e.g. direct investment in the host country.

Temporary movement of a natural person (Mode 4) — Temporary presence of natural persons in a market for the purposes of supplying services, e.g. professionals, employees of service providers.

Most-favoured Nation Treatment — A service or service supplier from a WTO member country must be treated as favourably as a service or service supplier from any other country.

National Treatment — Foreign services and service providers must be treated no less favourably than their domestic counterparts.

Natural Person — An individual who is a national of a country under the law of that country, or in the case of a country which does not have nationals (e.g. territories), an individual who has the right of permanent residence under the law of that country.

Organizational Form — The structure of a firm, i.e. corporation, partnership, etc.

Technically Infeasible — Not possible because technology does not permit it.

Unbound — Describes a situation where a WTO Member wishes to remain able to introduce or maintain measures inconsistent with market access and national treatment obligations.

ANNEX B

SUMMARY OF GATS COMMITMENTS RELATED TO ENGINEERING

This annex summarizes the commitments and restrictions (related to the consulting engineering sector) made by WTO Members. The first section examines the horizontal restrictions that apply to all sectors (including engineering) while the second section includes details about the consulting engineering sector-specific commitments. Taken together these commitments represent the starting point for GATS 2000 negotiations. For reasons of presentation, the examination of sector-specific commitments are grouped by region and limited to Canada's major trading partners. Complete information on all WTO Member commitments is available on request or by consulting our website at http://services2000.ic.gc.ca. A glossary of the terminology used in this section can be found in Annex A.

HORIZONTAL RESTRICTIONS

These restrictions generally summarize broad measures affecting commercial presence and investment, real estate transaction restrictions, government subsidies or taxation, and temporary movement of natural persons. In addition to these restrictions, developing countries have also established preferences for firms that offer the best terms for transfer of technology. The horizontal commitments supersede any sector-specific commitments. To assess the full extend of trade liberalization, horizontal commitments have to be examined in conjunction with the sector-specific commitments.

1. Commercial Presence and Investment Restrictions

The acquisition and control of a domestic business by a foreigner may be subject to investment ceilings, restrictions as to the type of assets that may be held, local incorporation and presence requirements, and government approval. For example, Canada requires approval for all direct acquisitions of Canadian businesses with assets equal to or higher than a monetary amount established annually and published in February of each year in the Canada Gazette. In 1998, the threshold was C$179 million for WTO Members. In addition, several countries require that the majority of staff be locally hired.

2. Real Estate Transaction Restrictions

Many countries restrict the purchase of real estate and the acquisition of land. Nationality restrictions and deposit requirements are relatively common. Often, these regulations are established by sub-federal levels of government and as a result tend to be extremely complicated. Rather than impose restrictions on domestic real estate regulations, the GATS rules require transparency and access to information about these rules.

3. Government Subsidies or Taxation

To clarify issues related to domestic taxation and access to subsidies, member countries provided specific comments in their schedule on this issue. Foreigners may not be eligible for certain subsidies or may, under special circumstances, have to pay a different tax rate. For example, the United States reserves the right to impose higher taxes on a national, resident or corporation of a foreign country where a national, resident or corporation of the United States is being subject to discriminatory or extraterritorial taxes. All countries maintain sovereignty over domestic issues of taxation and subsidization.

4. Movement of Natural Persons

Generally, the GATS does not prevent a Member from applying measures to regulate the entry of natural persons into, or their temporary stay in, its territory. The movement of natural persons is unbound under most GATS schedules. However, many Members generally committed to allowing temporary entry for measures concerning intra-corporate transferees (managers, executives and specialists), personnel engaged in the establishment of a business, and service salespersons. Permanent entry is not dealt with in the GATS and remains under the authority of local immigration authorities.

ENGINEERING SECTOR-SPECIFIC COMMITMENTS

This section outlines the sector-specific commitments and limitations to market access and national treatment established in the individual country schedules. In total, 70 and 43 countries provided schedules for the engineering and integrated engineering industries respectively, but the level of commitment varies significantly by region and country. For reasons of presentation, the examination of sector-specific commitments is grouped by region and limited to Canada's major trading partners.

North America

(The terms of access provided by both the United States and Mexico in the GATS are not as liberal as those provided in the North American Free Trade Agreement.)

United States

The United States made commitments in both engineering and integrated engineering services.
No limitations were placed on cross-border service delivery, consumption abroad or commercial presence for both market access and national treatment.
The United States is unbound with respect to the presence of natural persons.
In addition, market access for the presence of natural persons is restricted by a requirement for U.S. citizenship for licensing in the District of Columbia.

In-state residency, required for licensing in Idaho, Iowa, Kansas, Maine, Mississippi, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, Texas and West Virginia, restricts national treatment for the presence of natural persons.

Mexico

Mexico only made commitments in engineering services, but not in integrated engineering services.
Mexico is unbound with respect to the presence of natural persons.
Foreign investment in this sector is allowed up to 100% of the registered capital of firms.

South America

(The terms of access provided by Chile in the GATS are not as liberal as those provided in the Canada-Chile Free Trade Agreement.)

Countries with GATS commitments in engineering services: *Argentina, Brazil, Chile, Ecuador, Guyana, Peru and Venezuela*. Only Venezuela has made commitments in integrated engineering services.
Except Ecuador, Peru and Guyana, South American countries have remained relatively unbound in the engineering sector.
In Argentina, persons seeking to provide professional services must obtain recognition of their professional degree, enrol in the relevant college and establish a local presence.
In Brazil, foreign service suppliers must join a Brazilian service supplier in a specific type of legal entity (consórcio); the Brazilian partner shall maintain majority control. The contract establishing the consórcio must clearly define its objective.
In Peru, in order to be able to provide engineering services, foreign professionals must have their professional degrees officially recognized. Where reciprocal conventions exist, this requirement may be waived. They must also enrol in the relevant professional college in accordance with Article I of Law No. 24648 of 23 January 1987, which may be done on a temporary basis. There may be a difference in the amount of the enrolment dues for Peruvians and foreigners.

Central America and the Caribbean

Countries with GATS commitments in engineering services: *Antigua and Barbuda, Aruba, Cuba, the Dominican Republic, El Salvador, Jamaica, the Netherlands Antilles and Panama*. Only Panama and the Dominican Republic made commitments in integrated engineering services.
The Dominican Republic and Panama have remained relatively unbound in this sector although all countries remain unbound with respect to the presence of natural persons.
In the Dominican Republic, a prior permit is required, as well as compliance with the regulations of the college of Engineers, Architects and Surveyors of the Dominican Republic (CODIA).

In Panama, persons responsible for engineering work must be professionals licensed in Panama. The hiring of foreign professionals in the field of engineering for purposes limited to that specialization may be permitted, provided that the Engineering and Architecture Technical Council can show that there are no Panamanian professionals suitable for providing such services. If a foreign professional is hired for more than 12 months, the hiring entity must employ a Panamanian professional in order that he may receive the training necessary to enable him to replace the foreigner at the end of the contract. Authorizations to hire foreign specialists for less than 12 months may not be extended.
Commercial presence in Antigua and Barbuda is restricted by the "Engineers Act."
In Jamaica, joint ventures are preferred and board examinations/licensing is required for commercial presence.

European Union

Countries with GATS Commitments in engineering services: *Austria, Belgium, Denmark, Finland, France, Germany, Greece, Netherlands, Ireland, Italy, Luxembourg, Portugal, Spain, Sweden and the United Kingdom.* All these countries also made commitments in the integrated engineering sector.
Commitments vary slightly by country, but the majority of EU countries have established fairly liberal commitments in engineering and integrated engineering.
Greece, Italy and Portugal remain unbound with respect to the cross-border supply of services.
For market access, Spain, Italy and Portugal have restricted commercial presence to natural persons. Italy and Portugal allow professional association (no incorporation) among natural persons.
The presence of natural persons is unbound.
The United Kingdom requires an economic needs test for engineers.
Belgium, Denmark, the Netherlands, the United Kingdom and Sweden require a university degree and professional qualifications and three years of professional experience in the sector.
Spain requires academic and professional qualifications recognized by the national authorities and licence delivered by the Professional Association.

Other European Countries (including Eastern Europe)

Countries with GATS Commitments in engineering services: *Bulgaria, the Czech the Republic, Hungary, Iceland, Norway, Poland, Liechtenstein, Romania, the Slovak Republic, Slovenia and Switzerland.* All these countries, except Poland and Hungary, also made commitments in the integrated engineering sector.
Most of these countries, with the exception of Bulgaria and the Czech and Slovak Republics, have relatively minor limitations on market access or national treatment other than for the presence of natural persons.

In Bulgaria, partnerships are required for market access of commercial enterprises unless the project was won through international auction by foreign service suppliers. Accreditation is subject to the following criteria: the main scope of the foreign person's activity must be the relevant services (for commercial presence only); experience in the field of construction; project performed during the last two years; staff and technical capacity; bank references from a first rank foreign bank (for commercial presence only). Services must be supplied by employees under the following conditions: access is limited to natural persons subject to recognition of their technical qualifications and accreditation by a professional chamber in the Republic of Bulgaria.
For market access of commercial enterprises, authorization by the Czech or Slovak Chamber of Authorized Engineers is required (authorization by analogous foreign institutions may be recognized). Natural and juridical persons may provide engineering services only if authorized. There are also nationality and residence conditions.
Hungary requires permanent residency for market access of natural persons.
Liechtenstein and Switzerland require nationality for survey activities, for official public purposes, and for national treatment purposes (however, foreign surveyors can work under the responsibility of a licensed domestic surveyor).
For national treatment, three years of prior professional practice in Switzerland is required in the canton of Lucern for building engineers.
In Slovenia, the submission of plans for approval by the competent authorities requires co-operation with an established supplier of planning services.

Middle East

Countries with GATS commitments in engineering services: *Israel, Kuwait, Turkey, and the United Arab Emirates*. Israel and Kuwait also made commitments in integrated engineering services.
With the exception of Kuwait, these countries have relatively few limitations on market access or national treatment.
For market access in Turkey, foreigners must become a temporary member of the related Union of Chambers.
For both market access and national treatment, Kuwait remains unbound with respect to cross-border supply, consumption abroad, and the presence of natural persons.

Asia Pacific

Countries with GATS commitments in engineering services: *India, Indonesia, Japan, Korea, Malaysia, Mongolia, Pakistan, Singapore and Thailand.* Indonesia, Japan, Korea and Malaysia also made commitments in integrated engineering services.
The commitments in this region vary quite substantially among the countries, only Korea and Mongolia are relatively liberal (only unbound for the presence of natural persons).

Thailand remains unbound with respect to cross-border supply and the presence of civil engineers for market access. Market access for other natural persons is restricted as indicated in the horizontal commitment section. Commercial presence is limited according to the horizontal commitments, and for national treatment foreign equity participation cannot exceed 49%.
India remains unbound with respect to cross-border supply, consumption abroad and the presence of natural persons. For market access, commercial presence must be through incorporation with a foreign equity ceiling of 51%.
The limitations on foreign service providers are fairly significant in Indonesia. Market access for cross-border supply and consumption abroad is unbound for government funded projects.
National treatment is unbound for cross-border supply and consumption abroad. Joint operations or joint ventures are required for commercial presence with the precise requirements varying by sub-sector. For national treatment, the presence of natural persons is unbound and for market access the presence of natural persons is unbound except for directors and technical experts.
For most engineering services, the Japanese schedule is relatively unrestricted other than the fact that the presence of natural persons is unbound. However, for some engineering sub-sectors commercial presence is required.
For market access in Malaysia, engineering services may be supplied only by natural persons who are temporarily registered. For national treatment, engineering services must be authenticated by a registered professional engineer in Malaysia. Otherwise, the presence of natural persons is unbound.
In Pakistan, the cross-border supply of engineering services remains unbound and consumption abroad remains unbound because of technical infeasibility. Market access for commercial presence is limited by partnership or joint venture requirements for engineers or engineering firms and a foreign equity maximum of 40% for engineering consultancy firms. The presence of natural persons is unbound.
In Singapore, market access for commercial presence is limited by various requirements depending on the type of commercial presence. Any engineering work must be under the control and management of a registered professional engineer in the relevant discipline who has a valid practising certificate. Corporations are allowed only to have registered professional engineers or allied professionals as directors. For limited corporation, not less than two thirds of each class of shares of the corporation shall be beneficially-owned by and registered in the names of registered professional engineers or allied professionals, unless otherwise specified by the Minister for National Development. For unlimited corporations, all registered members of the corporation must be registered professional engineers, allied professionals or a nominee of the previous. The presence of natural persons is unbound.

China *(An observer government that has applied to join the WTO, but has not yet become a member. It is not legally bound by any commitment.)*
China remains unbound with respect to the cross-border supply of engineering services.
Market access for commercial presence is restricted to joint ventures or contractual joint ventures. Foreign participants to joint ventures shall be registered institutions in their own countries.

National treatment requires that, for commercial presence, an engineer is registered in his/her own country.
The presence of natural persons remains unbound.

Africa

Countries with GATS commitments in engineering services: *Botswana, Djibouti, Gambia, Ivory Coast, Lesotho, Morocco, Senegal, Sierra Leone, South Africa and Swaziland.* Botswana, Gambia, Lesotho, Sierra Leone, South Africa and Swaziland also made commitments in the integrated engineering service sector.
The commitments in this region vary significantly among countries, with South Africa the most liberalized and Morocco the most unbound.
South Africa and Djibouti have no limitations on market access or national treatment for all modes of supply except the presence of natural persons. The presence of natural persons is unbound in both countries.
The Ivory Coast remains unbound with respect to cross-border supply and consumption abroad. National treatment of commercial presence is limited to enterprises that receive government approval. The criteria to meet in order to obtain approval may include: the preferential use of local services to the extent that they are available and equivalent to those of foreign origin, and employment and training of local executives and supervisors. Market access for the presence of natural persons is unbound except for managers, senior executives and specialists who are transferred to a subsidiary company incorporated in the Ivory Coast.
Morocco remains unbound with respect to cross-border supply, consumption abroad and the presence of natural persons. Also, a foreign firm established in Morocco must be associated with a Moroccan firm through any form of association (joint venture, subcontracting, etc.) for the provision of construction and engineering services.
Gambia remains unbound with respect to the presence of natural persons and market access for commercial presence.
Botswana remains unbound with respect to cross-border supply and the presence of natural persons. Market access for commercial presence is limited to foreign firms which are registered institutions allowed to practice in their country of origin. For national treatment, the qualifications of foreign professionals employed by the firm should be recognized by the appropriate legislated Council or, if none exist, the Botswana Institute of Engineers.
Swaziland remains unbound with respect to market access for cross-border supply and the presence of natural persons (except for senior qualified chartered engineers).
Sierra Leone remains unbound with respect to the presence of natural persons. Market access requires partnerships for commercial presence. The foreign participants to joint ventures shall be registered institutions in their own countries.

Australasia

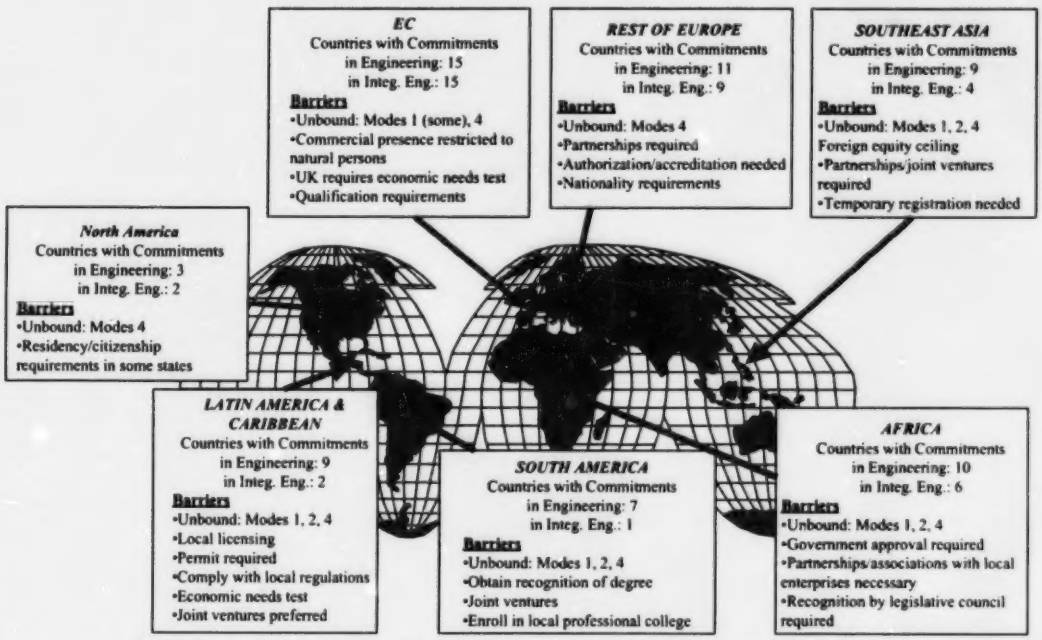
Countries with GATS commitments in engineering services: *Australia, New Zealand and Papua New Guinea*. Only Australia made commitments in the integrated engineering services sector. Most of these countries have relatively unrestricted market access and national treatment. The only exception is that the presence of natural persons is unbound.
For national treatment, New Zealand limits certification of certain works involving health and safety to registered engineers who, to become registered, must ordinarily reside in New Zealand.

Table 2
Countries with GATS Commitments in the Engineering Sub-Sectors

Country	Engineering Services	Integrated Engineering Services
Antigua and Barbuda	x	
Argentina	x	
Aruba	x	
Australia	x	x
Botswana	x	x
Brazil	x	
Bulgaria	x	x
Canada	x	x
Chile	x	
China	x	
Cuba	x	
Czech Republic	x	x
Djibouti	x	
Dominican Republic	x	x
Ecuador	x	
El Salvador	x	
European Community	x	x
Gambia	x	x
Guyana	x	
Hungary	x	x
Iceland	x	x
India	x	
Indonesia	x	x
Israel	x	x
Ivory Coast	x	
Jamaica	x	
Japan	x	x
Korea RP	x	x
Kuwait	x	x
Lesotho	x	x
Liechtenstein	x	x
Malaysia	x	x
Mexico	x	
Mongolia	x	
Morocco	x	
Netherlands Antilles	x	
New Zealand	x	

Norway	x	x
Pakistan	x	x
Panama	x	x
Papua New Guinea	x	
Peru	x	
Poland	x	
Romania	x	
Senegal	x	
Sierra Leone	x	x
Singapore	x	
Slovak Republic	x	x
Slovenia	x	x
Solomon Islands	x	
South Africa	x	x
Swaziland	x	x
Switzerland	x	x
Thailand	x	
Turkey	x	
United Arab Emirates	x	
United States	x	x
Venezuela	x	x

Figure 6
THE CONSULTING ENGINEERING SECTOR
Limitations to GATS Commitments



Modes: (1) Cross-border; (2) Consumption abroad; (3) Commercial presence; (4) Presence of natural persons.